Patent claims

1. A pharmaceutical dosage form comprising the active substance N-(2-(2-phthalimidoethoxy)-acetyl)-L-alanyl-D-glutamic acid.

2. The pharmaceutical dosage form according to claim 1 wherein the dosage form is suitable for controlled and / or targeted delivery of the active substance to the distal portions of the gastrointestinal tract of humans and animals.

3. The pharmaceutical dosage form according to claim 2 wherein the distal portions of the gastrointestinal tract are ileum, ceacum and colon.

4. The pharmaceutical dosage form according to any one of claims from 1 to 3 wherein the dosage form is administered to humans or animals in the amount from about 10 mg to about 1000 mg of the active substance according to claim 1 in a single dose or more divided doses.

5. The pharmaceutical dosage form according to any one of claims 1 to 4 wherein the dosage form comprises a core and an inner coat.

6. The pharmaceutical dosage form according to claim 5 wherein the core comprises the active substance N-(2-(2-phthalimidoethoxy)-acetyl)-L-alanyl-D-glutamic acid and a polysaccharide.

7. The pharmaceutical dosage form according to claim 6 wherein the polysaccharide is selected from the group consisting of pectin or alginate, either in the form of acid or in the form of metal salt, galactomannans, covalently crosslinked dextran, amylose, xanthans, carrageenan and starch or combinations of the said polysaccharides or their salts with the same specific degradability.

8. The pharmaceutical dosage form according to claim 7 wherein the polysaccharide is selected from the group consisting of pectin and calcium pectinate.

9. The pharmaceutical dosage form according to claim 6 wherein the core is a solid dispersion of the active substance in the calcium pectinate, forming a calcium pectinate matrix.

10. The pharmaceutical dosage form according to claim 6 wherein the core further comprises a glidant selected from the group consisting of magnesium stearate, calcium stearate and aerosil.

11. The pharmaceutical dosage form according to claim 5 wherein the inner coat prevents the release of the active substance in the proximal portions of the small intestine.

12. The pharmaceutical dosage form according to claim 11 wherein the inner coat comprises a polymer selected from the group consisting of methacrylate ester copolymers, mixture of polyvinyl acetate and polyvinylpyrrolidone and/or combinations thereof.

13. The pharmaceutical dosage form according to claim 12 wherein the selected combination of polymers is combination of copolymers of acrylic and methacrylic acid esters with a low content of quartenary ammonium groups.

14. The pharmaceutical dosage form according to claim 5 wherein the dosage form further comprises an outer coat which is insoluble in an acidic environment at pH below 5 and prevents release of the active substance in the acidic medium of the stomach.

15. The pharmaceutical dosage form according to claim 14 wherein the outer coat comprises an acidoresistant polymer selected from the group consisting of derivatives of methacrylic acid copolymer, hydroxypropylmethyl cellulose phthalate, hydroxyethylcellulose phthalate, cellulose acetate phthalate, polyvinyl acetyl phthalate, hydroxypropylmethylcellulose acetate succinate or combinations thereof.

16. The pharmaceutical dosage form according to claim 15 wherein the acidoresistant polymer is an anionic copolymer based on methacrylic acid and ethyl acrylate.

17. The pharmaceutical dosage forms according to claims 12 and 15 wherein the coat further comprises a glidant selected from the group consisting of talc, kaolin and glycerol monostearate.

18. The pharmaceutical dosage form according to claim 17 wherein the glidant is talc.

19. The pharmaceutical dosage forms according the claims 12 and 15 wherein the coats further comprise a plasticizer selected from the group consisting of triethyl citrate, tributyl citrate, acetyltriethyl citrate, acetyltributyl citrate, diethyl phthalate, dibutyl phthalate, dibutyl sebacate, glyceryl triacetate, triacetin, polyethylene glycol 6000 and polyoxyethylene (20) sorbitan monooleate.

20. The pharmaceutical dosage form according to claim 19 wherein the plasticizer is triethyl citrate.

21. A pharmaceutical dosage form comprising:

- a core - a calcium pectinate matrix in which the active substance N-(2-(2-phthalimidoethoxy)-acetyl)-L-alanyl-D-glutamic acid is dispersed, comprising magnesium stearate, and

- inner coat – comprising polymers Eudragit RS and Eudragit RL, talc and triethyl citrate, and
- outer coat – comprising polymer Eudragit L-55, talc and triethyl citrate.

22. A pharmaceutical dosage form comprising:
- a core - a calcium pectinate matrix in which an active substance is dispersed, comprising magnesium stearate, and
- inner coat – comprising polymers Eudragit RS and Eudragit RL, talc and triethyl citrate, and
- outer coat – comprising polymer Eudragit L-55, talc and triethyl citrate.

23. The pharmaceutical dosage form according to claim 22 wherein the active substance is selected from the group consisting of any active substances that need the controlled and/or targeted delivery to the distal portions of gastrointestinal tract of humans or animals.

24. The pharmaceutical dosage form according to claim 23 wherein the distal portions of the gastrointestinal tract are ileum, caecum and colon.

25. The pharmaceutical dosage form according to any of claims from 1 to 24 wherein the dosage form may be in a form of a microcapsule, a coated microparticle, a coated microsphere, a coated granule, a coated pellet, a tablet or a capsule.

26. The pharmaceutical dosage form according to claim 25 wherein the dosage form is in a form of a microcapsule.

27. The pharmaceutical dosage form according to claim 26 wherein the microcapsules are further incorporated into an inert tablet matrix or an inert capsule.

28. The pharmaceutical dosage form according to claim 5 wherein the dosage form is in a form of a microcapsule which is embedded

- either into a gastroresistant tablet matrix forming a tablet, or
- into an inert tablet matrix which is subsequently coated with a coat from a gastroresistant and/or acidoresistant polymer forming a tablet, or
- into a capsule from a gastroresistant and/or acidoresistant polymer, or
- into an inert capsule which is subsequently coated with a coat from a gastroresistant and/or acidoresistant polymer.

29. The pharmaceutical dosage form according to claim 28 wherein the dosage form is a tablet comprising microcapsules embedded into a gastroresistant tablet matrix.

30. The pharmaceutical dosage form according to claim 29 where the tablet matrix is hydroxypropylmethyl cellulose phthalate combination with a mixture of polyvinyl acetate and polyvinylpyrrolidone.

31. The pharmaceutical dosage form according to claim 28 wherein the gastroresistant and/or acidoresistant polymer is selected from the group consisting of derivatives of methacrylic acid copolymer, hydroxypropylmethyl cellulose phthalate, hydroxyethyl cellulose phthalate, cellulose acetate phthalate, polyvinyl acetyl phthalate, hydroxypropylmethylcellulose acetate succinate or combinations thereof.

32. A process for the preparation of the pharmaceutical dosage form wherein the dosage form according to any one of claims from 1 to 31 is prepared.

33. Use of a pharmaceutical dosage form according to any one of claims from 1 to 31 for the preparation of medicament for the treatment of chronic inflammatory diseases in humans or animals.
34. Use of a pharmaceutical dosage form according to claim 33 wherein the chronic inflammatory diseases are selected from the group consisting of colitis, nonspecific ulcerative colitis and Crohn's disease.

35. Use of a pharmaceutical dosage form according to any one of claims from 1 to 31 for the treatment of chronic inflammatory diseases in humans or animals.

36. Use of a pharmaceutical dosage form according to claim 35 wherein the chronic inflammatory diseases are selected from the group consisting colitis, nonspecific ulcerative colitis and Crohn's disease.